5/46

SPLIT

| DART AEROSPACE LTD             | Work Order:  | 24315 A     |
|--------------------------------|--------------|-------------|
| Description: Skidtube Material | Part Number: | D6014-064   |
| Dwg: D6014 Rev. A              | Qty:         | 36 10       |
|                                |              | Page 1 of 1 |

| Step | Location | Procedure   | By  | Date     | Qty |
|------|----------|---|-----|----------|-----|
| 1    | DC       | Issue Traveler  | 4   | 0510.03  | 36  |
| 2    | PG       | Issue P/O: 200862( a) Extrude as per Dwg D6014 b) Material: 7075-T73/T73510/T73511 (QQ-A-200/11) Seamless Aluminum Tube c) Minimum ultimate tensile strength = 68 ksi d) Minimum tensile yield strength = 57 ksi Possible Supplier: Aluminum Works Material certification is required | u   | 05-912   | 36  |
| 3    | RG       | Receive and Inspect for transit damage Ensure Material certification is attached  | cd_ | 05/11/08 | 10  |
| 4    | QC6      | Inspect dimensions as per Dwg D6014 Ensure Material certification complies with Dwg D6014   | 4   | x.11.08  | 10  |
| 5    | FP       | Chemical Conversion Coat as per QSI 005 4.1   |     |          |     |
| 6    | QC3      | Inspect Chemical Conversion Coat  |     |          |     |
| 7    | ST       | Identify and Stock  | cd  | 05/11/09 | 10  |
| 8    | AC       | Cost / part: 41925  |     | 05-11-10 | 10  |
| 9    | DC       | Close W/O 9/925<br>Inspect Level 21   | A   | 05/11/10 | 10  |

| Rev | Date     | Change    | Revised By | Approved |
|-----|----------|-----------|------------|----------|
| Α   | 05.08.31 | New issue | KJ/JLM (   | 111      |

RELEASED

one time

| Dart Aerospa | ace Ltd |
|--------------|---------|
|--------------|---------|

| Dait      | erospace                              | Ltu         |                                |                             |           |                                 |                          |          |
|-----------|---------------------------------------|-------------|--------------------------------|-----------------------------|-----------|---------------------------------|--------------------------|----------|
| W/O:      |                                       |             | V                              | ORK ORDER CHANGES           | 3         |                                 |                          |          |
| DATE STEP |                                       | gi.         | PROCEDURE CH                   | Ву                          | Date Qty  | Approval<br>Mfg / Design<br>Mgr | Approval<br>QC Inspector |          |
|           |                                       |             |                                |                             |           |                                 |                          |          |
| - 14      |                                       |             |                                |                             |           |                                 |                          |          |
| *         |                                       |             |                                |                             |           |                                 |                          |          |
| NCR:      |                                       |             | WORK OR                        | DER NON-CONFORMAN           | CE (NCR   | )                               |                          |          |
|           | DATE STEP Description of NC Section A | Description | of NC                          | Corrective Action Section B |           | Verification                    |                          | Anneousl |
| DATE      |                                       | 1-747-1     | Action Description  Design Mgr | Sign &<br>Date              | Section C | Approval<br>Design Mgr          | Approval<br>QC Inspector |          |
|           |                                       |             |                                |                             |           |                                 |                          |          |

|                     |         | Do  | Description of NC     |                                |                | Corrective Action Section B | Verification           | Annewal      | Approval |        |
|---------------------|---------|-----|-----------------------|--------------------------------|----------------|-----------------------------|------------------------|--------------|----------|--------|
| DATE STEP Descripti | Section | A   | Initial<br>Design Mgr | Action Description  Design Mgr | Sign &<br>Date | Section C                   | Approval<br>Design Mgr | QC Inspector |          |        |
|                     |         |     |                       |                                |                |                             |                        |              |          |        |
|                     |         |     |                       |                                |                |                             |                        |              |          |        |
|                     |         |     |                       |                                |                |                             |                        | 31           |          |        |
|                     |         |     |                       |                                |                |                             | +                      |              |          |        |
|                     |         |     |                       |                                |                |                             |                        |              |          |        |
|                     |         |     |                       |                                |                |                             |                        | 72           |          |        |
|                     |         |     |                       |                                |                |                             |                        |              |          | 70     |
|                     |         |     |                       |                                |                |                             |                        |              |          | FOR E  |
|                     | Ť       |     |                       |                                |                |                             |                        |              |          | ri pir |
|                     |         | 1.0 |                       | 9                              |                |                             |                        |              |          |        |

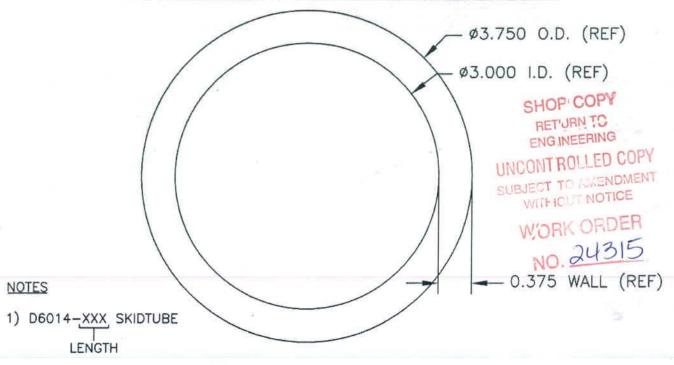
| Part No:                         | PAR #: | Fault Category: NCR: | Yes No DQA:     | Date: 05/11/10 |
|----------------------------------|--------|----------------------|-----------------|----------------|
| NOTE: Date & initial all entries | 4      |                      | QA: N/C Closed: | Date:          |



| DESIGN   | DRAWN BY  | DART                 | AEROSPACE<br>PORT HADLOCK, |       | INC.   |
|----------|-----------|----------------------|----------------------------|-------|--------|
| CHECKED  | APPROVED. | DRAWING NO.<br>D6014 |                            | SH    | REV. A |
| DATE     |           | TITLE                | 7 Lyn 1 5.7                | . 17. | SCALE  |
| 05.03.18 |           | SKIDTUBE             | MATERIAL                   |       | 1:1    |
| A        | 05.03.18  | NEW ISSU             | JE                         |       |        |

RELEASE 8 05 08 .01

## SPECIFICATION CONTROL DRAWING



WHERE XXX IS LENGTH IN INCHES EG. 64" LONG TUBE: D6014-064

2) MATERIAL: 3.750 OD x 0.375 WALL 7075-T73/T73510/T73511 PER QQ-A-200/11

SEAMLESS ALUMINUM TUBE.

MINIMUM ULTIMATE TENSILE STRENGTH = 68 ksi MINIMUM YIELD TENSILE STRENGTH = 57 ksi

3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:

O.D.: ± 0.008 MEAN (±0.016 INCLUDING OVALITY) WALL: ±0.015 MEAN (±0.038 INCLUDING ECCENTRICITY)

XXX + 0.188 / -0.000LENGTH:

STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

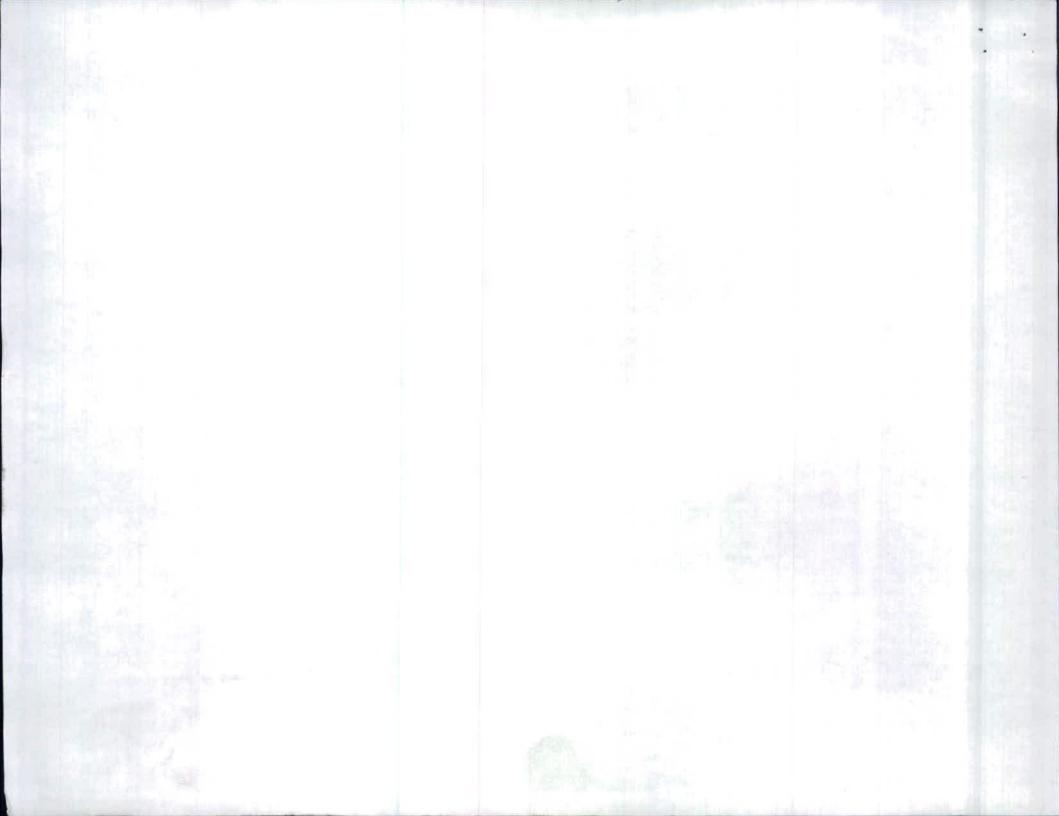
4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS DEFECTS UP TO 0.005" MAY BE BLENDED OUT SCRATCHES, NICKS, OR DENTS. LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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| B |           |     |  |
|---|-----------|-----|--|
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|   | is<br>sec |     |  |
|   |           |     |  |
|   |           |     |  |
|   |           | An. |  |



## Job Costing Report

|   | U                         | ob costing k | reborc       |                | 5 5 02      |
|---|---------------------------|--------------|--------------|----------------|-------------|
| Dart Aerospace Ltd                      |                           |              |              | Sep 20,        |             |
| Hawkesbury                              |                           |              |              | 09:59 at       | n           |
|   |                           |              |              |                |             |
| Work Order No                           | : 0024315                 |              |              |                |             |
|   | : D6014-104               |              | Department   | Code:          |             |
| 3                                       | : WK546                   |              | Burden Fla   |                | V           |
|   | : Main                    |              | WO Status    | : Open         | 12)         |
| Main WO Number                          | . Main                    |              | Invoice St   |                | voiced      |
|   | DC014 104                 |              | Invoice Da   |                | VOICCU      |
| House Part Number                       | : D6014-104               |              | Invoice Nu   |                |             |
| Description :                           |                           |              |              |                | 0.00        |
| Manufactured : No                       |                           |              | Invoice Am   | ount:          | 0.00        |
| Amount Req'd :                          | 0                         |              | 12 P. 122 IV | 22             |             |
| Amount Done :                           | 0                         |              | Order Entr   |                | an aratical |
| Start Date                              | : 09-20-05                |              | OE Value     | :              | 0.00        |
| Est Finish Date                         |                           |              |              |                |             |
| Act Finish Date                         |                           |              | Est Mark U   |                |             |
| Drawings Reqd                           | : No                      |              | Actual Mar   | k Up : 0.00    | 00%         |
| Ok for Approval                         |                           |              |              |                |             |
| Approval Rec'd                          | :                         |              | \$0 Posted   | to Finished Go | oods        |
|   |                           |              |              |                |             |
|   | Estimated                 | Actual       | Var. %       | Posted         | To Post     |
| ======================================= |                           |              |              | ==========     |             |
| Material Cost                           | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| Engineering Hours                       | 0.00                      | 0.00         | 0.00         |                |             |
| Engineering Cost                        | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| Production Hours                        | 0.00                      | 0,00         | 0.00         |                |             |
| Production Cost                         | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| Packaging Hours                         | 0.00                      | 0.00         | 0.00         |                |             |
| Packaging Cost                          | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| OverHead Hours                          | 0.00                      | 0.00         | 0.00         |                |             |
| OverHead Cost                           | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| CNC Hours                               | 0.00                      | 0.00         | 0.00         |                |             |
| CNC                                     | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| Misc. Hours                             | 0.00                      | 0.00         | 0.00         |                | 1.7.7       |
| Misc.                                   | 0.00                      | 0.00         | 0.00         | 0.00           | 0.00        |
| - 100                                   | ========                  | ========     | ======       | 0.00           | 0.00        |
| Burden                                  | 0.00                      | 0.00         | 0.00         |                |             |
|   | . =======                 | ========     | 175.033.00   |                |             |
| Total Cost                              | 0.00                      | 0.00         | 0.00         |                |             |
| Mark up                                 |                           | 0.000        | 0.00         |                |             |
| Selling Cost                            | The state of the state of | 0.00         |              |                |             |
| berring cost                            | 0.00                      | 0.00         |              |                |             |

Estimated

0.00

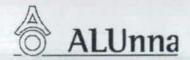
0.00

Actual

0.00

0.00

Labour Hrs/Amount Done : Profits/(Loss) :



## Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 | Certificat de Reception 3.1- EN 10204:2004

Kunde: Client:

Dart Aerospace Ltd.

Zeugnisnummer:

837/05

1270 Aberdeen Street

Cert No.: / No. du certificat: Bestellnummer:

2008621

K6A1K7 Produkt:

Order No. / No. de commande

Product / Produit:

Rohre nahtios gepresst

Hawkesbury, ON

Tubes seamless extruded Tubes file sur aiguille

Auftrag:

15626/1

Spezifikation:

AMS - QQ - A - 200/11E

Our Reference/Notre Reference:

Specification:

7075

Zustand:

T 73511

Werkstoff: Alloy/Alliage:

Temper/État

Abmessung Size / Dimension 3,750 INCH

x 3,000 INCH x 0,375 INCH x 104,000 INCH

Kennzeichnung

D6014-104

ALUnna-Cert No.837/05-7075-T73511-cast No.4692-AMS-QQA/200/11E-3.750" OD X0.375"Wall-Heat No.250/10lot15626/1-1-P.O.2008621

lbs

Marking/Marquage:

Delivered Material / Matérial délivre:

pcs. 10

428

1 Chemische Analyse

Chemical Analysis / analyse chimique

|      | mi 1 m / m | ,,,,,,,           |                                 |  |  | , , , , , ,  |  |  |  |  |   |  |   |
|------|------------|-------------------|---------------------------------|--|--|--|--|--|--|--|---|--|---|
|      | Si         | Fe                | Cu                              | Mn   | Mg   | Cr   | Zn   | Ti   | Pb   | Zr   | Bi  | Sn   | Ni  |
| min. |            |                   | 1,2                             |  | 2,1  | 0,18   | 5,1  |  |  |  |   |  |   |
| max. | 0,40       | 0,50              | 2,0                             | 0,30                                       | 2,9  | 0,28   | 6,1  | 0,20   |  |  |   |  |   |
|      | 0,077      | 0,174             | 1,445                           | 0,032                                      | 2,415  | 0,210  | 5,898  | 0,039  | 0,003  | 0,0344   | 0,0001  | 0,0013   | 0,0040  |
|      | min.       | min.<br>max. 0,40 | Si Fe<br>min.<br>max. 0,40 0,50 | Si Fe Cu<br>min. 1,2<br>max. 0,40 0,50 2,0 | Si Fe Cu Mn min. 1,2 max. 0,40 0,50 2,0 0,30 | Min. Si Fe Cu Mn Mg min. 1,2 2,1 max. 0,40 0,50 2,0 0,30 2,9 | Min. Si Fe Cu Mn Mg Cr 2,1 0,18 max. 0,40 0,50 2,0 0,30 2,9 0,28 | Min. Si Fe Cu Mn Mg Cr Zn Min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 | Min. Si Fe Cu Mn Mg Cr Zn Ti min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 0,20 | Si Fe Cu Mn Mg Cr Zn Ti Pb min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 0,20 | Si Fe Cu Mn Mg Cr Zn Ti Pb Zr min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 0,20 | Si Fe Cu Mn Mg Cr Zn Ti Pb Zr Bi min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 0,20 | min. 1,2 2,1 0,18 5,1 max. 0,40 0,50 2,0 0,30 2,9 0,28 6,1 0,20 |

Elements without Indication < 0,01 %

| 2. Mechani                    | ische Eigen         | schaften             | Mechanical Properties / Valeurs Mecaniques |                   |                |                  |  |  |
|-------------------------------|---------------------|----------------------|--|-------------------|----------------|------------------|--|--|
| Anforderungen<br>Requirements | tensile<br>(Rm) ksi | yield<br>(Rp0,2) ksi | elongation<br>2" %                         | elongation<br>A % | Hardness<br>HB | Heat No.         |  |  |
| min.<br>max.                  | 68,0                | 57,0                 |  |                   |                |                  |  |  |
| 1                             | 80,330              | 71,775               | 11,0                                       |                   | 151            | 250/10 - 10 pcs. |  |  |
|                               |                     |                      |  |                   |                |                  |  |  |

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: Resultats:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order Nous confirmons que la livraison a été controlée et correspond avec les conventions faites à la réception de la commande

KroosD

Certified acc. to DIN EN ISO 9001:2000, valid until 2006-03-09

Certificate No.: 001959 QM

Abnahmebeauftragter

31.10.2005

